REMARKS

Claims 1, 2, 4, 5, 6, 13, 14, 16 and 17 are presently pending in the subject patent application.

Claims 1, 2, 13 and 14 stand rejected under 35 USC 103(e) as being anticipated by Alexander (US 6,272,120).

Claims 4, 5, 16 and 17 stand rejected under 35 USC 103(a) as being unpatentable over Alexander (US 6,272,120) in view of Cheston (US 6,405,259).

Claim 6 stands rejected under 35 USC 103(a) as being unpatentable over Alexander in view of Cheston and Warren (US 5,912,921).

With the current amendment, Independent Claims 1 and 13 have been amended, as set out above. Further, dependent Claims 4 and 16 have been cancelled, without prejudice, and the subject matter thereof incorporated into independent Claims 1 and 13, respectively.

The Applicant submits that the art cited by the Examiner does not anticipate the invention, as currently claimed. The Applicant also submits that the art cited by the Examiner is insufficient to sustain a *prima facie* obviousness rejection of the invention, as currently claimed and, therefore, that the claimed invention is not obvious in view of the cited art. The Applicant's submissions will be discussed in detail below, commencing with a review of claim 1 of the subject patent application.

INDEPENDENT CLAIM 1

New independent claim 1 of the subject patent application recites a communication device for facilitating communication between a wired network and mobile wireless devices. A first of the mobile wireless device is configured for communication using a first communication protocol, and a second of the mobile wireless devices is

configured for communication using a second communication protocol that is different from the first communication protocol.

The communication device, as presently claimed, comprises:

(1) a wired network interface configured for interfacing with the wired network;

(2) a first radio configured for communication with a first mobile wireless device via with the first communication protocol;

(3) a second radio configured for communication with a second mobile wireless device via with the second communication protocol; and

(4) a data controller in communication with the network interface and the first and second radios for controlling data traffic between the wired network and the wireless devices.

The data controller is configured to:

(i) receive from the wired network data intended for reception by one of the mobile wireless devices;

(ii) select one of the radios, the one radio being configured for direct communication with the one mobile wireless device; and

(iii) transmit all the received data directly to the one mobile wireless device via the selected radio.

The received data includes wireless protocol information that indicates a wireless protocol used for communicating the data to the one mobile wireless device. The data controller is also configured to select the one radio in accordance with the communication protocol associated with the received data.

The art cited by the Examiner neither anticipates, nor renders obvious, the communication device defined by amended claim 1.

1.0: ANTICIPATION

Alexander (US 6,272,120) describes a multi-radio bridge for coupling together multiple stationary LANs. Alexander discloses that the bridge 100 includes two or more equivalent radios 250 that communicate directly with other stationary wireless client-bridges 166 (col. 9, lines 16 to 22). Alexander does not teach or suggest that the radios 250 of the bridge 100 could be used to communicate directly with mobile terminals.

Alexander discloses that the bridge 100 includes a routing table 400 for routing packet data 200 to the appropriate radio 250. The routing table 400 includes information that identifies which radio 250 should be used to send the packet data 200 to reach the appropriate wireless client-bridge 166 (col. 11, lines 6 to 9). Although Alexander discloses that the routing table 400 may include information that identifies the mobile terminals 172 associated with each wireless client-bridge 166 (col. 11, lines 22 to 25), the radios 250 of the bridge 100 do not themselves communicate directly with the mobile terminals 172. Rather, the radios 250 of the bridge 100 only communicate with the stationary wireless client-bridges 166, which in turn communicate with their associated mobile terminals 172.

In the Official Action, the Examiner repeatedly implied that the LANs described by Alexander were mobile wireless devices. This interpretation of Alexander is incorrect. As Alexander disclosed at column 4, lines 3 to 18 of the patent, the LANs 126, 128 have a hardwired data communication path made of a twisted pair cable, shield coaxial cable or fibre optic cable.. As such, the LANs described by Alexander are stationary LANs. Although the stationary LANs may themselves communicate with mobile wireless devices, the stationary LANs are not themselves mobile wireless devices.

Thus, Alexander does not describe a bridge 100 that includes radios that are configured for direct communication with the mobile wireless terminals 172, as required by independent Claim 1. Alexander also does not describe a bridge 100

that includes a controller that transmits data directly to mobile wireless devices via the radios, as required by independent Claim 1.

Further, Alexander does not teach selecting the appropriate radio 250 for transmission of the data based on the communication protocol associated with the mobile wireless device. Instead, Alexander only teaches maintaining a routing table 400 that includes information identifying the mobile terminals 172 associated with each wireless client-bridge 166 (col. 11, lines 22 to 25).

Accordingly, the communication device defined by independent Claim 1 of the subject patent application is not anticipated by Alexander.

2.0: OBVIOUSNESS

Although the Examiner did not reject Claim 1 for obviousness, to expedite allowance of the subject patent application, the Applicant submits that the art cited by the Examiner would not provide any suggestion of a communication device configured in accordance with amended claim 1.

Specifically, the teachings of Cheston and Warren would not suggest modifying the dual-radio wireless bridge described by Alexander (implemented for the purpose of communicating directly with stationary bridges in a LAN) to communicate directly with mobile wireless devices that were themselves configured with different communication protocols, and to select the appropriate radio for transmission of data based on the communication protocol associated with the mobile wireless device.

Also, a hypothetical person of ordinary skill would not be motivated by the cited art to modify the dual-radio bridge 100 of Alexander to select the appropriate radio for transmission of data to a wireless device based on communication protocol since the application of the teaching of Cheston to the dual-radio bridge 100 would result in a bridge was useless for the purpose intended.

Accordingly, it is the Applicant's position that the invention recited in independent claim 1 of the subject patent application cannot be considered obvious in view of the cited references.

The Applicant's position will be discussed in detail below, with reference to each of the cited references.

2.1 No suggestion to modify Alexander to communicate directly with mobile terminals, and to select the appropriate radio for transmission of the data based on the communication protocol associated with the mobile wireless device

Alexander (US 6,272,120):
As discussed previously, Alexander only describes a bridge 100 that communicates directly with other stationary wireless client-bridges 166 (col. 9, lines 16 to 22). Alexander does not teach or suggest that the bridge 100 could be used to communicate directly with mobile terminals.

Although Alexander discloses that the routing table 400 may include information that identifies the mobile terminals 172 associated with each wireless client-bridge 166 (col. 11, lines 22 to 25), the radios 250 of the bridge 100 do not themselves communicate directly with the mobile terminals 172. Rather, the radios 250 of the bridge 100 only communicate directly with the stationary wireless client-bridges 166, which in turn communicate with their associated mobile terminals 172.

Further, Alexander clearly contemplated the idea of having mobile wireless terminals 172 within the communication network. However, Alexander, who is an individual possessed of inventive skill, did not contemplate having the bridge 100 communicate directly with the mobile wireless terminals 172. Rather, Alexander only contemplated having the bridge 100 communicate directly with stationary

wireless client-bridges 166. And, at column 6, lines 3 to 6 of the patent, Alexander disclosed that the stationary bridges 166 communicate in a dedicated manner with the other stationary bridges 166.

Thus, Alexander would not suggest to the person of ordinary skill modifying the bridge 100 to communicate directly with mobile wireless terminals 172. Instead, since Alexander is an individual possessed of inventive skill, Alexander would only suggest to the person of ordinary skill the desirability of using the bridge 100 to communicate with stationary wireless client-bridges 166.

Cheston (US 6,405,259):

(i) No Suggestion to Modify Alexander:

Cheston describes a data processing system for transmitting network packets that identify only selected network clients. As the patentee described at column 3, lines 45 to 52 of the patent, and depicted in Fig 1, the data processing system includes a network server 100, one or more client devices 104, and a network hub 102 that interconnects the network server 100 and the client device 104 via respective LAN busses 106. Although Cheston disclosed at column 3, lines 57 to 58 that the word "network" contemplated any type of data communications channel, Cheston did not provide any example of network other than a wired network. Further, Cheston did not disclose that the network hub 102 included multiple radios, but instead only disclosed that the network hub 102 connected to the network server 100 and the client device 104 via physical bus connections.

Accordingly, Cheston would not suggest to the person of ordinary skill modifying the dual-radio bridge 100 of Alexander to communicate directly with mobile wireless terminals.

In the Official Action, the Examiner stated that, at column 3, lines 25 to 44, and column 4, lines 21 to 45, Cheston disclosed a network controller having a filter that routes selected packets with a particular protocol type, and ignore all other packets

having a different protocol type. The Examiner then stated that it would have been obvious to include packet identifying the protocol type as taught by Cheston into Alexander's invention to minimize delay and increase efficiency of transferring packets. The Applicant disagrees with the Examiner's reading of Cheston, and the conclusion reached thereon.

As Cheston discloses at column 5, line 58 to column 6, line 25, and at column 8, line 51 to column 9, line 9, the client devices 104 (depicted in Fig. 2) each include a microcontroller 302 that includes a filter 233 that filters out selected network packets received from the network. The filter 233 is not located in a controller that includes multiple radios, as required by Independent Claim 1 of the subject patent application, but is instead located in a client device.

Also, Cheston is only concerned with the movement of network packets over a physical wired network, not a wireless network. Accordingly, as stated above, Cheston would not suggest to the person of ordinary skill modifying the dual-radio bridge 100 of Alexander to communicate directly with mobile wireless terminals.

Further, although the filter 233 may be programmed to pass packets having a group identifier identifying a particular protocol type, the filter 233 does not control the movement of network packets to the network. Instead, the filter 233 inhibits the movement of network packets to the state machine of the client device. In addition, the filter 233 does not select a particular destination for the network packet based on the protocol type. Instead, the filter 233 merely conveys the network packets to the state machine, or suppresses the packets completely, based on the protocol type.

Accordingly, Cheston would not suggest to the person of ordinary skill modifying the dual-radio bridge 100 of Alexander to select the appropriate radio for transmission of data to a wireless device based on communication protocol.

(ii) No Motivation to Modify Alexander:

Alexander is directed to maintaining communication between a bridge and multiple stationary LANs. Conversely, Cheston either conveys the network packets to the state machine, or suppresses the packets completely, based on the protocol type. A person of ordinary skill would not be motivated by Cheston to modify the dual-radio bridge 100 of Alexander to **select the appropriate radio for transmission of data to a wireless device based on communication protocol** since the application of the teaching of Cheston to the dual-radio bridge 100 would result in a bridge that inhibited communication, thereby defeating the primary objective of Alexander.

At column 10, line 57 to column 11, line 23, Alexander describes a scenario in which a mobile wireless terminal 172 roams from one wireless client-bridge 166 to another wireless client-bridge 166. If the multi-radio bridge 100 transmits a packet to the client-bridge 166 that was previously associated with the mobile terminal 172, that client-bridge 166 will reply to the multi-radio bridge 100 with a negative acknowledgement. In response, the multi-radio bridge 100 issues a broadcast message via all of its radios 250.

Presumably, each client-bridge 166 would relay the broadcast message via all of its access points 176. The mobile terminal 172 for which the broadcast message was intended would respond to its client-bridge 166 with an acknowledgement. The client-bridge 166 would then forward the acknowledgement to the multi-radio bridge 100 which, in turn, would update the routing table 400 with the new location of the mobile terminal 172.

As will be apparent, unless the original client-bridge 166 and the new client-bridge 166 are configured with the same communication protocol, the mobile terminal 172 would not receive the broadcast message. Similarly, none of the client-bridges 166 would receive the acknowledgement from the mobile terminal 172.

In other words, if the wireless terminals 172 taught be Alexander were replaced with mobile wireless devices that were configured with different communication protocols, the wireless devices would be unable to roam. A person of ordinary skill would not be motivated by Cheston to modify the dual-radio bridge 100 of Alexander to **select the appropriate radio for transmission of data to a wireless device based on communication protocol** since the application of the teaching of Cheston to the dual-radio bridge 100 would result in a bridge was useless for the purpose intended.

Warren (US 5,912,921)

Warren describes a wireless LAN having a central host processing unit that communicates simultaneously with a number of client nodes at multiple data rates. The host processing unit maintains a data rate table of active client nodes, and a current data rate for each active client nodes. Periodically, the host processing unit transmits a high speed beacon signal and a low speed beacon signal to each active client node.

Each active client node receives the beacon signals, and transmits a return signal back to the host processing unit that identifies the optimum data rate for that client node. The host processing unit updates the data rate table based on the return signal received from each client node. Subsequent messages are transmitted to the client nodes at the data rate specified in the data rate table.

Although the host processing unit communicates with the wireless client nodes, the host processing unit does not select the appropriate radio for transmission of data to a client node based on communication protocol. **In fact, Warren is entirely silent on the exact mechanism used to route the messages to the client nodes.**

Accordingly, Warren would not suggest to the person of ordinary skill modifying the dual-radio bridge 100 of Alexander to select the appropriate radio for transmission of data to a wireless device based on communication protocol.

3.0 Summary of Submissions re Independent Claim 1

(i) Alexander does not teach the claimed invention

Alexander does not describe a bridge 100 that includes radios that are configured for direct communication with the mobile wireless terminals 172. Alexander does not describe a bridge 100 that includes a controller that transmits data directly to mobile wireless devices via the radios.

Further, Alexander does not teach selecting the appropriate radio 250 for transmission of the data based on the communication protocol associated with the mobile wireless device. Accordingly, Alexander does not teach the claimed communication device.

(ii) no suggestion to modify the multi-radio bridge 100 taught by Alexander to communicate directly with mobile wireless terminals, and to select the appropriate radio for transmission of data to one of the mobile wireless terminal based on communication protocol

Alexander contemplated the idea of having mobile wireless terminals 172 within the communication network. However, Alexander, who is an individual possessed of inventive skill, did not contemplate having the bridge 100 communicate directly with the mobile wireless terminals 172. Rather, Alexander only contemplated having the bridge 100 communicate directly with stationary wireless client-bridges 166.

Thus, Alexander would not suggest to the person of ordinary skill modifying the bridge 100 to communicate directly with mobile wireless terminals 172. Instead, since Alexander is an individual possessed of inventive skill, Alexander would only suggest to the person of ordinary skill the desirability of using the bridge 100 to communicate with stationary wireless client-bridges 166.

Cheston is only concerned with the movement of network packets over a physical wired network, not a wireless network. Further, the filter 233 inhibits the movement of network packets to the state machine of the client device. The filter 233 does not select a particular destination for the network packet based on the protocol type.

Warren describes a wireless LAN having a central host processing unit that communicates simultaneously with a number of client nodes at multiple data rates. However, the host processing unit does not select the appropriate radio for transmission of data to a client node based on communication protocol. In fact, Warren is entirely silent on the exact mechanism used to route the messages to the client nodes.

Therefore, none of the references cited by the Examiner would suggest modifying the dual-radio bridge 100 of Alexander to communicate directly with mobile wireless terminals, or to select the appropriate radio for transmission of data to a wireless device based on communication protocol.

(iii) no motivation to modify the multi-radio bridge 100 taught by Alexander to communicate directly with mobile terminals, and to select the appropriate radio for transmission of data to one of the mobile wireless terminal based on communication protocol

Alexander is directed to maintaining communication between a bridge and multiple stationary LANs. Conversely, Cheston either conveys the network packets to the state machine, or suppresses the packets completely, based on the protocol type. A person of ordinary skill would not be motivated by Cheston to modify the dual-radio bridge 100 of Alexander to select the appropriate radio for transmission of data to a wireless device based on communication protocol since the application of the teaching of Cheston to the dual-radio bridge 100 would result in a bridge that inhibited communication, thereby defeating the primary objective of Alexander.

Further, if the wireless terminals 172 taught by Alexander were replaced with mobile wireless devices that were configured with different communication protocols, the wireless devices would be unable to roam. A person of ordinary skill would not be motivated by Cheston to modify the dual-radio bridge 100 of Alexander to select the appropriate radio for transmission of data to a wireless device based on communication protocol since the application of the teaching of Cheston to the dual-radio bridge 100 would result in a bridge was useless for the purpose intended.

In other words, a person of ordinary skill would not be motivated by the cited references to modify the dual-radio bridge 100 of Alexander since the references cited by the Examiner would direct the person of ordinary skill away from such a modification.

(iii) Conclusion

Since the cited art does not teach the claimed invention, the invention claimed in independent Claim 1 is not anticipated by cited art.

Since the cited art does not suggest the claimed invention, and would direct the person of ordinary skill away from the claimed invention, the Applicant submits that the art cited by the Examiner is insufficient to sustain a *prima facie* obviousness rejection of the invention recited in claim 1. Accordingly, the invention claimed in independent Claim 1 cannot be considered obvious in view of the cited art.

Further, since claims 2, 5 and 6 depend from claim 1, the foregoing submissions apply equally to claims 2, 5 and 6. Accordingly, the Applicant respectfully requests that the Examiner withdraw the rejections of claims 1, 2, 5 and 6.

INDEPENDENT CLAIM 13

Independent Claim 13 is the method equivalent to Independent Claim 1. Accordingly, the submissions made in connection with Claim 1 apply equally to the obviousness rejection of Claim 13.

Further, since claims 14 and 17 depend from claim 13, the foregoing submissions apply equally to claims 14 and 17. Accordingly, the Applicant respectfully requests that the Examiner withdraw the rejections of claims 13, 14 and 17.

Respectfully submitted,
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